PTO/SR/08A (10-01)

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INFORMATION DISCLOSURE				Application Number	10/722,077	
				Filing Date	November 24, 2003	
STATEMENT BY APPLICANT (usc as many sheets as noccessary)			AN I	First Named Inventor	Anthony F. Barbet	
			cssory)	Art Unit	1645	
				Examiner Name		
Shect	1	of	4	Attorney Docket Number	UF-167XC3D2	

U.S. PATENT DOCUMENTS					
Examinor Initials*	Cilo tko '	Ducument Number Numbur - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Whore Relevant Passages of Relevant Figures Appear
PD.	UI	US-4.879.213	11-07-1989	Fox of ul.	All
	U2	U\$ 6,643,578	07-01-1997	Robinson el al	All
7/	U3	US-5,703.441	07-21-1998	Carl et ਹੀ.	All
$\overline{\mathbf{W}}$	Ü	US 6,025,338	02-15-2000	Dorhet et al.	All .
	U5	US-6,261,872	08-25-2001	Barbel et al.	All
	UB	US-			
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		FOREIGN	PATENT DOC	JMENTS		
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PD.	F1	WO 00/12030	10-18-1990	Wash St U. Rus Found Inc.	Ali	
	F2	WO 98/10554	04-23-1998	Univ. of Florida	All	
	F3	WO 99/13720	03-25-1999	The Ulio St Univ	All	
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Substitute for form 14498/PTO

Anthony F. Barbet

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Complete if Known 10/722,077 **Application Number** INFORMATION DISCLOSURE Filing Date November 24, 2003

First Named Inventor

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STATEMENT BY APPLICANT

Group Art Unit 1645 Examiner Name Sheot **Attorney Docket Number** UF-167XC3D2

		NON PATENT LITERATURE DOCUMENTS	
Examiner Cita No. 1		Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), dato, page(s), volume-issue number(s), publisher, city and/or country where published.	Υ²
PD	R1 .	ROWIE, Michael V. et al., "Potential Value of Major Antigenic Protein 2 for Serological Diagnosis of Heartwater and Related Ehrlichiat Infections," Clinical and Diagnostic Laboratory Immunology, 1999, 6(2):209-215, Pub: American Society for Microbiology	
	R2	BREITSCHWERDT, Edward B. et al., "Doxycyclina Hydate Treatment of Experimental Canine Ehrlichlosis Followed By Challenge Inoculation with Two Ehrlichia canis Strains," Antimicrobial Agents and Chamothempy, 1998, 42(2):362-368, Pub: American Society for Microbiology	
	R3	BROQUI, P. et al., "Serologic Diagnosis of Human Monocytic Ethlichlosis by Immunoblot Analysis," Clinical & Diagnostic Laboratory Immunology, 1994, 1(6):845-9, Pub: American Society for Microbiology	
	R4	BURGESS, Wilson H, et al., "Possible Dissociation of the Heparin-binding and Mitogonic Activities of Heparin-binding (Acidic Fibroblact) Growth Factor-1 from its Receptor-binding Activities by Site-directed Mutagenesis of a Single Lysine Residue." Journal of Cell Biology, 1990, 111:2129-2138, Pub: The Rockefeller Univ. Press	
	R5	COX, Graham J.M., of al., "Bovine Herpesvirus 1: Immune Responses in Mice and Cattle Injected with Plasmid DNA," Journal of Virology, 1993, 67(9):5664-5667, Pub: American Society for Microbiology	
	R6	DANKO, I. and J.A. Wolff, "Direct Gene Transfer into Musclo," Vaccine, 1994, 12:1499-1563, Pub. Unknown	
	R7	Du PLESSIS, J.L., "Immunity in Heartwater: I. A Proliminary Note on the Role of Serum Antibodies," Onderstopoort J. vet Ros., 1970, 37(3):147-150, Pub: Heer Printing Company (Ply) Ltd. for the Cov't Printer, Pretoria, Republic Of South Africa	Γ
	· R8	DUTTA, Sukanta K. et al., "Association of Deficiency in Antibody Response to Vaccine and Hebrogenoity of Ehrlichia risticii Strains with Potomac Horse Fever Vaccine Faiture in Horses," Journal of Clinical Microbiology, 1998, 36(2):506-512, Pub: American Society for Microbiology	
	RO	GODING, J.W., "Production and Application of Monoclonal Antibodies in Cell Biology, Blochemistry & Immunology," Monoclonal Antibodies: Principles & Practico (2d ed.), 1986, Ch.3, 78-83, Pub: Academic Press, Harcourt Brace Jovanovich, Publishers, Australia	
	R10	KELLY, P.J. ot al., "Serological Evidence for Antigenic Relationships Between Ehrlichle canis and Cowdria numinantium," Res. Vet. Sci., 1994, 56:170-4, Pub; unknown	
	R11	LAZAR, Elliane et al., "Transforming Growth Factor a: Mutation of Aspartic Acid 47 and Leucine 48 Results in Different Biological Activities," Molecular and Cellular Biology, 1988, 8(3):1247-1252, Pub: American Society for Microbiology	
V	R12	LEWIS, Jr., G.E., of al., "Experimentally induced infection of dogs, cals, and nonhuman printates with Ehrlichia equi, cliologic agent of equine ehrlichiasis," Am. J. Vet. Res., 1975, 36(1):85-88. (abstract), Pub: Uriknown	

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		NON PATENT LITERATURE DOCUMENTS	
Examiner Cito No. 1		Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, senal, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²,
PD	R13	MAHAN, S.M., et al., "Molecular cloning of a gene encoding the immunogenic 21 kDa protein of Cowdria numinantium," Microbiologyl, 1994, 140:2135-2142, Pub. Unknown	
	R14	McGUIRE, Travis C., et at., "Recombinant Vaccinia Virus Expression of Anaplasma marginate Surface Protein MSP-1a: Effect of Promoters, Loader Sequences and GPI Anchor Sequence on Antibody Response," Vaccino. 1994, 12(5):465-471, Pub. Butterworth-Heinemann Ltd.	
	R15	NYIKA, A. et al., "A DNA Vaccine Protects Mice Against the Rickettsial Agent Cowdna ruminantium," Parasite Immunology, 1998, 20:111-119. Pub: Blackwell Science Ltd.	
	R16	OBERLE, Suzan M. and Anthony F. Barbot, "Derivation of the Complete <i>msp4</i> Gene Sequence of <i>Anaplasma marginale</i> Willhout Cloning," Gene, 1993, 136:291-294, Pub: Elsevier Science Publishers B.V.	
	R17	REDDY, G. Roman, of al., "Sequence Heterogeneity of the Major Antigenic Protein 1 Genes from Cowdria ruminantium Icolates from Different Geographical Areas," Clinical & Diagnostic Leberatory Immunology, 1996, 3(4):417-422, Pub: American Society for Microbiology	
	R18	RIKIHISA, Y., et al., "Western Immunoblot Analysis of Etrilichia chaloensis, E. canis, or E. ewingü Infections in Dogs and Humans," J. Clin. Microbiology, 1994, 32(9):2107-12, Pub. American Society for Microbiology	
	R19	RURANGIRWA, Fred R., et al., "Restriction of Major Surface Protein 2 (MSP2) Variants During Tick Transmission of the Ehrlichia Anaplasma marginale," Proc. Natl. Acad. Sci. USA, 1999, 96:3171-3176 (abstract), Pub: Uriknown	L
	R20	SCHÖDEL, MT. Aguado and PH. Lambert, "Introduction: Nucleic Acid Vaccines, WHO, Geneva, 17-18 May 1994," Vaccine, 1994, 12(16):1491-1492, Pub: Butterworth-Heinemann Ltd., Switzerland	
	R21	SEDEGAH, Martho, et al., "Protection Against Malaria by Immunization with Plasmid DNA Encoding Circumsporozolte Protein," Proc. Natl. Acad. Sci. USA, 1994, 91:9860-9870, Pub: Unknown	
	R22	SUMNER, John W., et al., "Protection of Guinea-Pigs from Experimental Rocky Mountain Spotted Fever by Immunization with Baculovirus-Expressed Rickettsia rickettsii rOmpA Protein," Vaccino, 1995, 13(1):29-35, Pub: Elsevier Science Ltd., Great Britain	
	R23	UILENBERG, Carrit, "I-leartwater (Cowdria ruminantium Infection): Current Status," Advances In Veterinary Science and Comparative Medicine, 1983, 27:427-480, Pub: Academic Press, Inc.	
V	R24	ULMER, J.B. of al., "Heterologous Protection Against Influenza by Injection of DNA Encoding a Viral Protein," Science, 1993, 259:1745-1749, Pub: Unknown	

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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*			
PD R25		ULMER, Jeffrey B. et al., "DNA Vaccines Promising: A New Approach to Inducing Protective Immunity," ASM Nows, 1996, 62(9):476-479, Pub: American Society for Microbiology	
	R26	van VLIET, A.H.M. et al., "Molecular Cloning, Sequence Analysis, and Expression of the Gane Encoding the Immunodominant 32-Kilodalton Prolein of Cowdria runninantium," Infection & Immunity, 1994, 62(4):1451-6, Pub. Unknown	
	R27	Van VLIET, A.H.M., ot al., "Use of a Specific Immunogenic Region on the Cowdrin ruminantium MAP1 Protein in a Scrological Assay," J. Clinical Microbiology, 1995, 33(9):2405-10, Pub: American Society of Microbiology	
	R28	VEMULAPALLI, R. ot al., "Pathogenic, Immunologic, and Molecular Differences Between Two Enrichia risticii Strains," J. Clinical Microbiology, 1995, 33(11):2987-2993, Pub. American Society for Microbiology	
V	R29	VISHWANATH, Suryanarayanan, et al., "A Recombinant Rickettsia conorti Vaccine Protects Guinea Pigs from Experimental Boutonneuse Fever and Rocky Mountain Spotted Fever," Infection and Immunity, 1990; 58(3):648-653	
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